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operation the plastic security member can be removed and the threaded spindle can escape into the space which becomes available.

By

43. (New) The drive according to claim 4, wherein each of the two pairs has two housing plates that are identical in design.

#### REMARKS

Claims 1-43 are now pending in this application. Originally filed claims 1-42 were replaced by claims 1-42 as amended by the Annexes to the International Preliminary Examination Report. Subsequently, claims 2, 6, 12-16, and 19-27 were amended by preliminary amendment filed on October 6, 2000. Claims 1-42 have now been amended for conformance to U.S. practice. Furthermore, new claim 43 has been added to cover the specific design deleted from claim 4. It is respectfully requested that the changes to the claims and the addition of the new claim be carefully reviewed by the Examiner and entered prior to examination.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Due to the number of amendments to the specification, Applicants submit herewith a substitute specification pursuant to 37 C.F.R. §1.125 and MPEP §608.01(q) to facilitate the prosecution of this application. The substitute specification is accompanied by a comparison document showing the changes between the original application as filed and the substitute specification. The substitute specification does not contain any new matter. Applicants respectfully request that the substitute specification be entered in this case.

In view of the foregoing amendments and remarks, consideration and allowance of this application are respectfully requested. If the Examiner believes that a telephone conference with applicants'

attorney might expedite prosecution of the application, the Examiner is invited to call at the telephone number indicated below.

Respectfully submitted,

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Ву

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#### VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A [Spindle or worm] drive for adjusting devices in motor vehicles [, more particularly for seat adjusting devices, window lifters and sliding roofs, with] comprising:

one of a fixed spindle [(5) or] and a fixed toothed rack [(51))
which is] fixed on [a first] one of two relatively displaceable
parts[7];

[with] a gear <u>assembly</u> [(9,9') which is] mounted on the <u>other of</u> the two [second of the] relatively displaceable parts[, and with]; and a gear housing [(7) for] holding the gear <u>assembly</u>, with the gear

housing [<del>(7) consisting of</del>] having at least two housing plates [<del>(71, 72, 71a, 71b, 72a, 72b, 77a, 77b, 78, 79)</del>] which can be fixed against each other by [means of] plug-type connectors[<del>-</del>];

[characterised in that the] wherein the plug-type connectors fix the position of the at least two housing plates [(71, 72, 71a, 71b, 72a, 72b, 77a, 77b, 78, 79) is fixed] relative to each other in all three-dimensional directions [by means of the plug-type connectors and that] and thereby form [the plug-type connectors are formed at the same time as] supporting connecting joints which absorb the gear forces.

- 2. (Twice Amended) [Drive] The drive according to claim 1, wherein [characterised in that] the at least two housing plates [(71, 72, 71a, 71b, 72a, 72b, 77a, 77b, 78, 79)] are fixed against each other solely at the plug-type connections.
- 3. (Amended) [Drive] The drive according to claim 1 or 2, wherein [characterised in that] the gear housing [(7) consists of] has two L-shaped housing plates [(77a, 77b)].
- 4. (Amended) [Drive] The drive according to claim 1 or 2, wherein [characterised in that] the gear housing [(7) consist of ] has

at least two pairs of opposing disc-like housing plates [<del>(71a, 71b, 72a, 72b)</del>] wherein the housing plates <del>(71a, 71b, 72a, 72b)</del> which are arranged in pairs are preferably identical in design.

- 5. (Amended) [Drive] The drive according to claim 1 or 2, wherein [characterised in that] the gear housing [(7) consists of] has a U-shaped housing plate [(78)] and a disc like housing plate [(79)].
- 6. (Twice Amended) [Drive] The drive according to claim 1 [characterised in that the], wherein the plug-type connectors each have a raised area [s (76, 76', 76'') of the plug-type connections] extending along the plane of one of the at least two housing plates [(72, 72a, 72b, 77, 78)] and an [the] associated recess[es (75, 75', 75'')] extending transversely to the plane of the one of the at least two housing plates [(72, 72a, 72b, 77, 78)].
- 7. (Amended) [Drive] The drive according to claim 6, wherein [characterised in that] the recess[es are formed as] is a through opening[s (75, 75', 75'')].
- 8. (Amended) [Drive] The drive according to claim 6, wherein [characterised in that] the raised area[s are formed as] is a web[s (76, 76', 76'')].
- 9. (Amended) [Drive] The drive according to [one of claims 6 to 8 characterised in that] claim 6, wherein the raised area[s (76, 76', 76'') of the plug-type connectors have in the assembly direction] has two [parallel] surfaces [(761, 762, 761', 762')] which are parallel to each other in the assembly direction [associated with] and the [matching] associated recess[es (75, 75', 75'') with] has two surfaces [(751, 752, 751', 752')] which are [likewise] parallel in the assembly direction.

- 10. (Amended) [Drive] The drive according to claim 6, wherein [one of claims 6 to 8 characterised in that] the raised area[s (76, 76', 76'') of the plug-type connectors have] has surfaces running conical in the assembly direction and the associated [with] recess[es (75, 75', 75'') having] has surfaces [(751, 752)] which [where necessary] are parallel in the assembly direction so that [during assembly] a press fit is achieved during assembly.
- 11. (Amended) [Drive] The drive according to claim 6, wherein [one of claims 6 to 8 characterised in that the raised areas (76, 76', 76'') of the plug-type connectors form at first a play fit with the recesses (75, 75', 75'') and that the fixing of] the housing plates [(72a, 72b, 77, 78) is achieved] are fixed by plastic deformation of the material in the area of the plug-type connectors.
- 12. (Twice Amended) [Drive] The drive according to claim 1, wherein [characterised in that] the housing plates [(72a, 72b, 77, 78)] are made from one of sintered material, cast material, steel [or] and plastics.
- 13. (Twice Amended) [Drive] The drive according to claim 1 [characterised in that] further comprising bearing points for the gear assembly, at least a part of [the bearing points (73, 73a, 73b, 74, 74', 74'', 74a, 74b) of the gear elements (91, 91', 92, 93, 94)] which are integrated in the at least two housing plates [(72a, 72b, 77, 78)].
- 14. (Twice Amended) [Drive] The drive according to claim 1, wherein the spindle is a threaded spindle and [characterised in that] the gear assembly [(9) consists of a threaded spindle (5),] includes a spindle nut [(92)] with [an] external worm wheel teeth [(92)] and a drive worm [(91)] engaging therewith.

- 15. (Twice Amended) [Drive] The drive according to claim 1, wherein [characterised in that] the gear assembly [(9) comprises a toothed rack (51),] includes a worm [(94)] with a worm wheel [(93) associated therewith] and a drive worm, [(91') wherein] the worm [(94) lying on an axis with the worm wheel [(93)] and [is] fixedly connected to same.
- 16. (Twice Amended) [Drive] The drive according to claim 1, [characterised in that] wherein the two relatively displaceable parts are the bottom rail and the top rail of a box-profile type guide rail assembly, the guide rail assembly having a hollow cavity; and

wherein the [threaded] spindle [(5)] is mounted in the hollow cavity [(31) of a box-profile type guide rail (3, 4) of a longitudinal seat adjustment device wherein the threaded spindle (5)] and is fixed through its ends on the bottom rail [(4) which is fixed on the vehicle whilst] and the gear housing [(7)] is fixed on the top rail [(3) which is displaceable relative thereto].

- 17. (Amended) [Drive] The drive according to claim 16, wherein [characterised in that] the gear housing [(7)] is mounted in a U-shaped gear socket [(81)] of a holder [(8) whose] with arms [(82a, 82b) are provided] for fixing the gear assembly [(9)] on the top rail [(3)].
- 18. (Amended) [Drive] The drive according to claim 17, wherein [16 and 17 characterised in that] the arms [(82a, 82b)] of the holder [(8)] extend over the entire length of the top rail [(3) and support] and have fastening openings [(83) associated with the] which correspond to fastening openings [(30)] of the top rail [(3)] so that the holder [(8)] can be connected to the top rail [(3)] and reinforces same.

- 19. (Twice Amended) [Drive] The drive according to claim 18 [16 characterised in that] wherein the fastening openings [(83)] of the holder [(81) are formed as] are fastening elements [(84)] with internal threads [, preferably in the form of passages,] which project into the hollow cavity [(31)].
- 20. (Twice Amended) [Drive] The drive according to claim 18, wherein [16 characterised in that] the gear assembly [(9)] and gear housing [is] are [pre-]assembled as a [complete] unit [and, installed] located in the holder [(8')], [can be pushed into] and in the hollow cavity [(31)] of the rail guide [(3, 4) where it can be] and screwed to the top rail [(3)] through the fastening openings [(83)].
- 21. (Twice Amended) [Drive] The drive according to claim 16, wherein [characterised in that the end areas (85a, 85b) of] the holder has end areas which are [(8') are] angled [and designed] so that they substantially fill out the free cross-sectional area of one of the top rail [(3)] and [for] the bottom rail [(4)].
- 22. (Twice Amended) [Drive] The drive according to claim [that characterised in that] 17, further comprising uncoupling elements [(10a, 10b)] of one of rubber [or] and plastic[s] are mounted to eliminate noise and compensate for tolerances between the gear assembly [(9)] and the arms [(86a, 86b)] of the gear socket [(81)] of the holder [(8)].
- 23. (Twice Amended) [Drive] The drive according to claim [that characterised in that] 17, further comprising ideal deformation points [(87a, 87b) are formed] between the [arms (86a, 86b) of the] gear socket [(81)] and the arms [(82a, 82b)] of the holder (8') so that when a predetermined maximum boundary strain is exceeded the

[arms (86a, 86b) swivel] gear socket swivels sideways and clamps the threaded spindle  $[\frac{(5)}{}]$ .

- 24. (Twice Amended) [Drive] The drive according to claim 1, wherein [characterised in that] the ends of the [threaded] spindle [(5)] are mounted in vibration-damping sleeves [or the like] to eliminate noise.
- 25. (Twice Amended) [Drive] The drive according to claim 1 [characterised in that] for use with a window lifter, wherein the two relatively displaceable parts are a vehicle door and a window pane, the [threaded] spindle [(5')] is fixed on [in] the vehicle door so that the [threaded] spindle [(5')] points in the direction of movement of [the] a window pane [(12) and that the gear which], the gear assembly is connected to the [threaded] spindle [(5')] and is connected [directly or indirectly] to the lower edge [(12)] of the window pane [(12)].
- 26. (Twice Amended) [Drive] The drive according to claim 1, wherein [characterised in that the] one of a spindle [or] and worm drive is a constituent part of an adjustment device for adjusting [the] one of a seat height, seat incline, seat cushion depth, head restraint [and/or] or backrest.
- 27. (Twice Amended) <u>A method</u> for assembling a gear housing for a [spindle or worm] drive [according to claim 1 in which] comprising:
- a) prefitting [the] gear elements [(91, 92, 93, 94)] and housing plates [(72a, 72b, 77, 78) are prefitted completed wherein] by fitting the housing plates [(72a, 72b, 77, 78) are fitted] together [and] with [the] plug-type connections [are] to form[ed as] a gear housing with supporting connecting joints that absorb[ing the] gear forces[7];

- b) <u>inserting</u> the gear elements [(91, 92, 93, 94)] and <u>the</u> housing plates [(72a, 72b, 77, 78) are inserted] into a device which holds the housing <u>plates</u> [(7)] with sufficiently light holding forces around the outer contour so that [that] the housing <u>plates</u> [plates (72a, 72b, 77, 78)] can be aligned when the gear elements [(91, 92, 93, 94)] are turned,
- c) <u>turning</u> the gear elements [(91, 92, 93, 94) are turned] for the purpose of aligning [the] bearing points [(73a, 73, 74a, 74b)] of the gear elements which are provided on the housing plates [(72a, 72b, 77, 78),]; and
- d) [and that] after alignment, [by increasing the holding forces] securing the position of the gear elements [(91, 92, 93, 94)] and housing plates [(72a, 72b, 77, 78)] relative to each other [is secured] by increasing the holding forces and permanently fixing the position of the housing plates [is permanently fixed] in all three-dimensional directions through action on the plug-type connectors.
- 28. (Amended) <u>The method</u> for assembling a gear housing [for the spindle or worm drive] according to claim 27, wherein [characterised in that] the gear elements [(91, 92, 93, 94)] are turned about at least 360° and are then held in this position and fixed.
- 29. (Amended) The method for assembling a gear housing [for the spindle or worm drive] according to claim 27, wherein [characterised in that] the gear elements [(91, 92, 93, 94)] are driven at a speed which is above [the] their nominal speed of the gear [(9)] and [during rotation of the gear elements (91, 92, 93, 94)] the position of the housing plates [(72a, 72b, 77, 78)] are fixed relative to each other during rotation of the gear elements.
- 30. (Amended) The method for assembling a gear housing [for the spindle or worm drive] according to claim 27, wherein [characterised

in that] the fixing of the housing plates [(72a, 72b, 77, 78)] is produced by staking [the] material in the area of the plug-type connectors, but outside of the area of [the] bearing bores [(74a, 74b)] for the gear elements [spindle nut (92)].

- 31. (Amended) The method for assembling a gear housing [for the spindle or worm drive] according to claim 27, wherein [characterised in that] the fixing of the housing plates [(72a, 72b, 77, 78)] is undertaken by one of laser welding [or by] and casting the plug-type connectors.
- 32. (Amended) The method for assembling a gear housing [for the spindle or worm drive] according to claim 27, wherein [characterised in that] the fixing of the housing plates [(72, 72b, 77, 78)] is carried out by sticking the plug-type connectors.
- 33. (Amended) The method for assembling a gear housing [for the spindle or worm drive] according to claim 27, wherein [characterised in that] holding the outer contour of the housing plates [(72a, 72b, 77, 78)], turning the gear elements [(91, 92, 93, 94)] and [staking the plug-type connectors] fixing of the housing plates are carried out in one combined assembly device.
- 34. (Amended) [Spindle] A spindle drive for adjusting devices in motor vehicles [wherein] comprising:
- a threaded spindle  $[\frac{(5)-is}]$  tensioned rotationally secure  $[\frac{d}]$  between two holders  $[\frac{(5a, 5b)}]$  at  $[\frac{the}]$  its ends  $[\frac{the}]$  wherein the threaded spindle is associated with]; and
- a spindle nut mounted in a gear <u>assembly and engaged with the spindle</u>[, characterised in that];

wherein the threaded spindle [\(\frac{(5)}{)}\)] is fixed [\(\text{through at least one ideal break point})\) in at least one holder [\(\frac{(5a, 6b)}{)}\)] through an ideal

break point and [that at least] wherein one end of the threaded spindle [(5) is formed as] has a positive locking element [(66a)] which can be connected to a rotating tool in order to overcome the ideal break point for the purpose of an emergency operation of the drive.

- 35. (Amended) [Spindle] The spindle drive according to claim 34, wherein [characterised in that] a threaded element [(60) which has] with a groove [(61)] as a [local] material weakened area is welded to one of the holders [(6a, 6b)] and the threaded element [(60)] is squashed through [this] the material [weakening] weakened area with the threaded spindle [(5)].
- 36. (Amended) [Spindle] The spindle drive according to claim 35, wherein [34 characterised in that] the threaded element [ $(60^{+++})$ ] has on the side remote from the holder [(6a, 6b)] a distance sleeve [(69)] for defining the travel path of the top rail [(3)] on the bottom rail [(4)].
- 37. (Amended) [Spindle] The spindle drive according to claim 34, wherein [characterised in that for holding the threaded spindle (5)] one of the holders [(6a, 6b)] has a passage [(62)] which is squashed with the threaded spindle [(5)] at at least one place for holding the threaded spindle.
- 38. (Amended) [Spindle] The spindle drive according to claim 34 [characterised in that] further comprising a threaded element [(60) is] welded to one of the holders [(6a, 6b)] and [this is associated with] a counter nut [(63)] for fixing the position of the threaded spindle [(5)].

- 39. (Amended) [Spindle] The spindle drive according to claim 34, wherein [characterised in that] a nut [(34)] which is held secured against rotation in positive locking engagement through a stop [(6e)] on one of the holders [(6a, 6b)] is welded to the threaded spindle [(5)] at at least one spot so that the welding spot [(60a)] is [formed as an] the ideal break point.
- 40. (Amended) [Spindle] The spindle drive according to claim 34, further comprising [characterised in that] an anti-rotation lock [preferably made of plastics and] mounted securedly against rotation on the threaded spindle [(5) is] and inserted with positive locking engagement into a threaded spindle receiving bore [(65b)] of a security plate, [(65)] wherein the anti-rotation lock [(66)] is destroyed during emergency operation of the threaded spindle [(5)].
- 41. (Amended) [Spindle] The spindle drive according to claim 34, wherein [characterised in that the] a security plate [(65)] fixes through a bracket [(65a)] the position of a nut [(64')] which is mounted on the threaded spindle [(5)] and secures the position of the threaded spindle [(5)].
- 42. (Amended) [Spindle] The spindle drive according to claim 34, wherein [characterised in that] a plastic[s] security member is located in a threaded spindle receiving opening of each holder [(67a) is shaped in a threaded spindle receiving opening (67) of both holders (6a, 6b)] so that a [the] circular round cross-section of [the] each threaded spindle receiving opening[s (67)] remains secure and the width [b] of the plastic[s] security member [(67a)] is greater than the diameter [d] of the threaded spindle receiving opening [(67)] wherein in the case of an emergency operation the plastic[s] security member [(67a)] can be removed and the threaded spindle [(5)] can escape into the space which becomes available.